Attachment J4

Florida Air National Guard (ANG), Jacksonville Electric Distribution System

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J4.1 Florida Air National Guard, Jacksonville Overview

The Florida Air National Guard (FANG), Jacksonville facility is located at the Jacksonville International Airport in Jacksonville Florida. The base covers about 332 acres of land. The FANG houses the 125th Fighter Wing, which includes the 202nd Red Horse Civil Engineering Squadron located at Camp Blanding, near Starke, Florida. The 202nd Red Horse unit is not included in this study.

The 125th Fighter Wing, Florida Air National Guard, is located at Jacksonville International Airport (IAP), Florida, with a NORAD Alert Detachment at Homestead AFB, Florida. Since its inception, the 125th has developed strong competencies in the Strategic Air Defense arena.

The roots of the 125th Fighter Wing date back to the period following World War II when the unit was first organized as the 159th Fighter Squadron on 9 February 1947 with an initial strength of 18 personnel and was equipped with the P-51 Mustang. In 1948, the 159th became one of the first Air National Guard units to be equipped with jets when it converted to the F-80C Shooting Star.

The unit was called to active duty on 10 October 1950 as a result of the outbreak of the Korean Conflict. After a nine-month conversion from the F-80 to the F-84E Thunderjet, the unit deployed to Japan where it flew air defense missions over the Korean theater. The unit was released from active duty on 9 July 1952, returning home to be re-equipped with the F-51H Mustang.

During the remainder of the early 1950s, the 159th was equipped with a multitude of different aircraft, including the T-6, B-26, C-45, F51H, T-33, F-80, and F86A. By the end of 1954, the unit was equipped with an entire squadron of F-80s. On 1 July 1956, the primary unit designation was changed to the 125th Fighter Interceptor Group (FIG), and the unit converted to the F-86D Super Sabre with the primary mission of air defense.

In July 1960, the 125th converted from the F-86D to the all-weather, supersonic F-102A / B Delta Dagger, followed in July 1974 by a conversion to the F-106A / B Delta Dart.

On October 1, 1979 the 125th FIG was officially assigned to the Air Defense Division of the Tactical Air Command, and subsequently was honored as an Air Force Outstanding Unit on March 2, 1980. The 125th reinforced its role as Air Defender on October 1, 1983 when it expanded its around-the-clock alert mission by adding a detachment at Homestead Air Force Base.

In 1985 the FANG added a non-flying unit with the formation of the 202nd Red Horse Civil Engineering Squadron (RHS). The 202nd was formed to provide a rapidly deployable, highly trained force to accomplish heavy damage repairs to runways, facilities, and utilities of the Air Force worldwide. That unit is located at Camp Blanding, near Starke, Florida. The 202nd RHS is actively involved in Hurricane Relief, Construction Projects for United States Air Force and Army National Guard Units, training for other Air National Guard and Air Force units, and Community Service.

In April 1987, the 125th converted to the F-16A/B, a multi-role fighter that was subsequently modified as the ADF-16 specifically designed for the Air Defense role.

On December 15, 1992 the 159th Weather Readiness Training Center and Weather Flight were added to the Florida Air National Guard. Located at Camp Blanding, the school billets and trains Air National Guard members as well as active duty airmen in their career field of weather predictions.
The 125th Fighter Wing has a dual mission - one state and one federal. The state mission is to provide trained and equipped personnel to protect life and property and to preserve peace, order, and public safety. The federal mission is to provide fully trained and qualified personnel to CINCNORAD in time of war or national emergency for the defense of the North American Continent. On a daily basis, the 125th is responsible for the maintenance of a NORAD Air Defense Alert site at Homestead ARB. In this capacity, the unit provides armed F-15 aircraft capable of intercepting, identifying, and, if necessary, destroying unknown aircraft which penetrate sovereign U.S. airspace. In the past, this threat has included Soviet Bear bombers, Cuban fighters, and narcotics traffickers. The installation is comprised of 41 buildings, and approximately 325,000 gross square feet.

J4.2 Electric Distribution System Description

J4.2.1 Electric Distribution System Fixed Equipment Inventory

The FANG, Jacksonville electric distribution system consists of all appurtenances physically connected to the distribution system from the point in which the distribution system enters the Installation, and/or Government ownership currently starts, to the point of demarcation defined by the real estate instruments. Generally, the point of demarcation will be the building footprint. The system may include, but is not limited to, substations, transformers, underground and overhead circuits, utility poles, switches, vaults, and lighting fixtures. The following description and inventory is included to provide the Offeror with a general understanding of the size and configuration of the distribution system. The inventory is assumed to be approximately 90 percent complete. The Offeror shall base the proposal on site inspections, information in the bidders library, other pertinent information, and to a lesser degree the following description. Under no circumstances shall the successful Contractor be entitled to any rate adjustments based on the accuracy of the following description and inventory.

J4.2.1.1 Description

The FANG, Jacksonville purchases electricity from JEA, formerly known as the Jacksonville Electric Authority. The power is delivered through a single 24.9 kV overhead feeder to the FANG owned switching station near the main gate to the base. The power is then distributed via two underground

feeds. The FANG owns and maintains the underground distribution facilities. The nominal system voltage is 24.9 kV grounded WYE.

The FANG, Jacksonville owned underground radial distribution lines serve the base loads. The typical phase conductors used for these lines is #1/0 Aluminum. Potential load limitations are due to conductor ampacity.

The FANG, Jacksonville presently has approximately 7 additional meters at other locations, 2 are serving reimbursable customers. The meters are presently maintained and read by base personnel.

The sources of information used for the development of the system inventory, capacity, and consumption were as follows:

- January 1997 through December 1998 Electric Utility bills.
- Florida FANG Installation Master Plan
- Electrical Distribution System Map U-4, Sheet 1 of 1

J4.2.1.2 Inventory

Table 1 provides a general listing of the major electric system fixed assets for the FANG, Jacksonville electric distribution system. The system will be sold in an "as is, where is" condition without any warranty, representation, or obligation on the part of the Government to make any alterations, repairs, or improvements. All ancillary equipment attached to and necessary for operating the system, though not specifically mentioned here in, is considered part of the purchased utility.

TABLE 1
FIXED INVENTORY
Electric Distribution System Inventory – FANG, Jacksonville

Item	Size	Quantity	Unit	Approximate Year of Construction
UNDERGROUND DISTRIBUTION SYSTEM				
Three Phase copper conductor	1/0	2,850	lf	1969
Three Phase copper conductor	1/0	16,500	lf	1985
Three Phase copper conductor	1/0	4,950	lf	1995
Three Phase copper conductor	1/0	2,700	lf	1998
Three Phase Aluminum conductor	#6	600	lf	1987
Three Phase Aluminum conductor	#4	3,600	lf	1969
Three Phase Aluminum conductor	1/0	2,600	lf	1987
Three Phase Aluminum conductor	1/0	1,500	lf	1975
Three Phase Aluminum conductor	1/0	7,300	lf	1996
Three Phase Aluminum conductor	500 kcmil	2,400	lf	1985
Switchgear	400 kVA	3	ea	1969
Switchgear	400 kVA	4	ea	1985
Switchgear	400 kVA	2	ea	1990
Switchgear	400 kVA	2	ea	1992

Item	Size	Quantity	Unit	Approximate Year of Construction
Switchgear	400 kVA	3	ea	1998
Service Instrumentation incl. breakers	200 A	7	ea	1985
Light pole, includes breakers Exterior fixtures, roadway luminaire, HPS 400 Watt	20 ft high	50	ea	1985
Transformer, 3ph, oil, 277/480 V, w/taps	750 kVA	1	ea	1998
Transformer, 3ph, oil, 277/480 V, w/taps	750 kVA	1	ea	1969
Transformer, 3ph, oil, 277/480 V, w/taps	500 kVA	2	ea	1985
Transformer, 3ph, oil, 277/480 V, w/taps	500 kVA	2	ea	1969
Transformer, 3ph, oil, 277/480 V, w/taps	300 kVA	1	ea	1985
Transformer, 3ph, oil, 277/480 V, w/taps	300 kVA	1	ea	1975
Transformer, 3ph, oil, 277/480 V, w/taps	300 kVA	4	ea	1969
Transformer, 3ph, oil, 277/480 V, w/taps	225 kVA	2	ea	1990
Transformer, 3ph, oil, 277/480 V, w/taps	225 kVA	2	ea	1975
Transformer, 3ph, oil, 277/480 V, w/taps	150 kVA	1	ea	1985
Transformer, 3ph, oil, 277/480 V, w/taps	300 kVA	1	ea	1975
Transformer, 3ph	75 kVA	1	ea	1985
Transformer, single phase	5 kVA	1	ea	1970
Substation equipment, power ct bkrs, vac ct bkrs	13-26kV	1	ea	1992
Substation equipment, disc switches, gang switches	13-26kV	1	ea	1969
Substation equipment, prot. equip, lightning arrests.	13-26kV	3	ea	1969
Substation equipment, insulators pedestal type		10	ea	1969
Disc switches, single switches,	13-26kV	13	ea	1969

Notes:
kVA = nominal kilovolt amperes
ea = each
LF = linear feet
sf = square feet

J4.2.2 Electrical Distribution System Non-Fixed Equipment and Specialized Tools Inventory

Table 2 lists other ancillary equipment (spare parts) and **Table 3** lists specialized vehicles and tools included in the purchase. Offerors shall field verify all equipment and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment and tools. The successful Contractor shall provide any and all equipment, vehicles, and tools, whether included in the purchase or not, to maintain a fully operating system under the terms of this contract.

TABLE 2
SPARE PARTS
Electric Distribution System – FANG, Jacksonville

Qty	Item	Make/Model	Description	Remarks
	None			

TABLE 3
SPECIALIZED EQUIPMENT AND VEHICLES
Electric Distribution System – FANG, Jacksonville

Description	Quantity	Location	Maker
None			

J4.2.3 Electric System Manuals, Drawings, and Records Inventory

Table 4 lists the manuals, drawings, and records that will be transferred with the system.

TABLE 4
MANUALS, DRAWINGS, AND RECORDS
Electric Distribution System - FANG, Jacksonville

Qty	Item	Description	Remarks
1 Set	As Built Drawings		See Base Civil Engineer

J4.3 Current Service Arrangement

The FANG, Jacksonville purchases electricity from JEA, formerly known as the Jacksonville Electric Authority. The power is delivered through a single 24.9 kV overhead feeder to the FANG owned switching station near the main gate to the base. The power is then distributed via two underground feeds. The FANG owns and maintains the underground distribution facilities. The nominal system voltage is 24.9 kV grounded WYE.

According to electrical consumption and billing records provided, the usage for FY 98 at The FANG is as follows:

Peak kW Demand (91% PF)	1,250	kW
Total Annual Consumption	5,633,000	kWH
Average Daily Consumption	15,433	kWH

The billing records included annual summaries for 1985 through 1998. Comparison of these records indicate the 1998 peak demand was approximately 7.9% higher than the 1997 peak demand, and the annual kWH usage had increased approximately 7.3% over the same period. The general trend for the period from 1985 through 1998 indicates a relatively flat kWH growth profile.

As required by this contract, the Contractor shall demonstrate the ability to meet and shall establish any and all requirements to provide electric distribution service to FANG, Jacksonville.

J4.4 Secondary Metering

The Installation may require secondary meters for internal billings of their reimbursable customers, utility usage management, and energy conservation monitoring. The Contractor shall assume full ownership and responsibility for existing and future secondary meters IAW paragraph C.3.

J4.4.1 Existing Secondary Meters

Table 5 provides a listing of the existing (at the time of contract award) secondary meters that will be transferred to the Contractor. The Contractor shall provide meter readings once a month for all secondary meters IAW J4.5 below.

TABLE 5
EXISTING SECONDARY METERS
Electric Distribution System – FANG, Jacksonville

Meter Location	Meter Description
None	

J4.4.2 Required New Secondary Meters

The Contractor shall install and calibrate new secondary meters as listed in Table 6. New secondary meters shall be installed IAW paragraph C.13, *Transition Plan.* After installation, the Contractor shall maintain and read these meters IAW paragraph C.3, and J4.5 below.

TABLE 6
NEW SECONDARY METERS
Electric Distribution System – FANG, Jacksonville

Meter Location	Meter Description
None Required	

J4.5 Monthly Submittals

The Contractor shall provide the Government monthly submittals for the following:
Invoice (IAW G.2). The Contractor's monthly invoice shall be presented in a format proposed by the Contractor and accepted by the Contracting Officer. Invoices shall be submitted by the 25th of each

month for the previous month. Invoices shall be submitted to the Contracting Officer's designee. (This information will be provided upon award)
Outage Report. The Contractor's monthly outage report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Outage reports shall include the following information for Scheduled and unscheduled outages:

Scheduled: Requestor, date, time, duration, facilities affected, feedback provided during outage, outage notification form number, and digging clearance number.
Unscheduled: Include date, time and duration, facilities affected, response time after notification, completion times, feedback provided at time of outage, specific item failure, probability of future failure, long term fix, and emergency digging clearance number.

Outage reports shall be submitted by the 25th of each month for the previous month. Outage reports shall be submitted to the Contracting Officer's designee. (This information will be provided upon award)

Meter Reading Report. The monthly meter reading report shall show the current and previous month readings for all secondary meters. The Contractor's monthly meter reading report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Meter reading reports shall be submitted by the 15th of each month for the previous month. Meter reading reports shall be submitted to the Contracting Officer's designee. (This information will be provided upon award)

System Efficiency Report. If required by Paragraph C.3, the Contractor shall submit a system efficiency report in a format proposed by the Contractor and accepted by the Contracting Officer. System efficiency reports shall be submitted by the 25th of each month for the previous month. System efficiency reports shall be submitted to the Contracting Officer's designee. (This information will be provided upon award)

J4.6 Energy Savings Projects

IAW paragraph C.3, Utility Service Requirement. The Government has not implemented any projects for energy conservation purposes:

J4.7 Service Area

IAW paragraph C.4, Service Area. The service area is defined as all areas within the FANG, Jacksonville Area boundaries.

J4.8 Off-Installation Sites

There are no off-installation sites associated with this scope.

J4.9 Specific Transition Requirements

IAW paragraph C.13, *Transition Plan*. **Table 7** lists service connections and disconnections required upon transfer, and **Table 8** lists the improvement projects required upon transfer of the FANG, Jacksonville electric distribution system.

TABLE 7
SERVICE CONNECTIONS AND DISCONNECTIONS
Electrical Distribution System – FANG, Jacksonville

Location	Description
None Required	

TABLE 8
SYSTEM IMPROVEMENT PROJECTS
Electrical Distribution System – FANG, Jacksonville

Location	Description
None Required	